ABSTRACT OF THE DISCLOSURE

A method and a computer program for generating a model for the functional response of a control device, for generating a manipulated variable for a controlled system in response to a preselected setpoint value is described. The model is also generated for nonlinear controlled systems by performing the following steps: calculating the $N^{th}$ derivative of the controlled variable as a function of the manipulated variable and of the controlled variable itself and/or its derivatives of the $n^{th}$ order with respect to time and generating the model for the control device by solving the $N^{th}$ derivative of the controlled variable for the manipulated variable.

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